Benthic Habitat Research: A Simulation of Research on the NOAA Nancy Foster
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Presentation #: ED43C-0951

I. ABSTRACT
A teacher who participated in the National Science Foundation supported ARMADA Project through the University of Rhode Island Office of Marine Programs will share a series of lessons based on her experiences working with marine researchers. All of the activities are hands-on, inquiry based for use in elementary and secondary classrooms. The primary objective of these lessons is to give students a better understanding of what real scientists do and why. This enables students to make a real world connection with the scientific community. The emphasis on environmental monitoring will help develop an understanding of the positive and negative consequences of human action on the Earth's oceans. It will enhance the student's observation skills and increase their ability to record and analyze data.

II. INTRODUCTION
This series of lessons is based on my summer research experience on the NOAA vessel the Nancy Foster. Working with a team of five scientists we were continuing research to evaluate the impact of commercial fishing and placement of an underground fiber optic cable on benthic habitats in the Stellwagen Bank National Marine Sanctuary. All activities were inquiry based and cover state and national standards.

III. METHOD
The concept was introduced by reading "Teacher at Sea" a book offered to educators free of change from NOAA. The students had to do a web search of the Armada Project and find the teacher that assisted in benthos habitat research at Stellwagen Bank National Marine Sanctuary.

The classroom was set up into five working centers.
Each center was equipped with materials needed to simulate actual research.

Four centers were viewing centers where students observed copies of the actual transect tapes taken by the SEABOSS of the ocean floor.

The central center was equipped with a salt-water aquarium, which represented the ocean above the sampling site.
A stream table with a bottom divided into three parts one sand, one gravel and one mud. These represent the different floor surfaces that samplings were taken from on the actual cruise.

All details and materials are explained in the lesson plan handout.

IX. CONCLUSION
Students feel a sense of accomplishment when the task is completed
They are able to transfer the experience to other learning situations
The information has a better chance of being stored in the memory for useful retrieval
They are more on task because they are a part of the learning process and not just spectators
Stimulates students who would normally not participate
Enables students to become critical thinkers, able to apply what they have learned
Allows students to engage in in-depth investigations drawing meaning and understanding from the experience
Connects students to the scientific community

X. RESULTS

For more information